



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,725	03/29/2000	Seok-Keun Koh	0630-2009PUS1	9859
2292	7590	08/19/2005		
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MAYEKAR, KISHOR	
			ART UNIT	PAPER NUMBER
			1753	
DATE MAILED: 08/19/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/509,725

Applicant(s)

KOH ET AL.

Examiner

Kishor Mayekar

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) 2-19, 22 and 30-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 20, 21, 23-26, 28, 29, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments with respect to claims 1, 20, 21, 23-26, 28, 29 33 and 34 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 20, 21, 24-26, 28, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin et al. (US 3,252,830) in light of Yokoyama et al. (5,080,971), both references cited in the last Office action. Cummin's invention is directed to a method for producing thin dielectric organic polymerics films which are employed in making a capacitor. Cummin discloses that the film is produced by all the steps as claimed (Fig. 2; col. 4, line 60 through col. 5, line 7; col. 3, lines 22-27; col. 3, lines 67-74; and col. 4, lines 9-10 and lines 27-30). Cummin also discloses in col. 4, lines 35-42 that the film thickness is less than 0.5 micron and relatively thicker films have been found to be less desirable. As to the adhesion property of

the films, it is inherently possessed by the films when the substrate is the anode. As to the plasma formation, Yokoyama discloses that positive and negative ions and radicals are generated during the forming of plasma (col. 4, lines 18-44). As to hydrophilicity or hydrophobicity, since the film is of a polymerized organic material, it is inherent in the Cummin's organic polymeric films as it is obtained by the same process steps. The difference between Cummin and the above claims is the recited period of applying the voltage. Because Cummin teaches the film thickness of less than 0.5 micron, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Cummin's teachings in light of Yokoyama as it has been settled that proper adjustment of a known effective variable of a known or obvious process is within the capabilities of one having ordinary skill in the art. *In re Aller* 105 USPQ 233; *In re Boesch* 205 USPQ 215.

The same is applied to claim 21 as it is obtained by the same process steps.

As to the subject matter of each of claims 25, 26 and 28, the same is applied because Cummin in light of Yokoyama as applied above discloses in col. 4, lines 27-38 that it is also possible to control the rate of polymerization, ie, by

operating the glow discharge process with a partial pressure of the carrier gas along with the organic monomer, and the thickness.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin '830 in light of Yokoyama '971 as applied to claims 1, 20, 21, 24, 33 and 34 above, and further in view of Yanagihara et al. (US 4,693,799), a reference cited by Applicant. The difference between Cummin in light of Yokoyama '971 and the instant claim is the DC discharge is performed periodically in the form of on/off pulsing during a total processing time. Yanagihara shows in a process for producing plasma polymerized film using a pulse discharging where the discharging is direct current discharge and wherein the gas is unsaturated aliphatic hydrocarbon monomer with an inert gas (see abstract; col. 2, line 52 through col. 3, line 15; col. 3, line 67 through col. 4, line 1; col. 4, lines 46-52; and col. 7, lines 15-24). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Cummin's teachings in light of Yokoyama as suggested by Yanagihara because this would result in improving properties of the organic polymeric films as compared to films obtained from a continuous plasma polymerization process.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin '830 in light of Yokoyama '971 as applied to claims 1, 20, 21, 24, 33 and 34 above, and further in view of Kleeberg et al. (US 5,089,290), another reference cited in the last Office action. The difference between Cummin in light of Yokoyama as applied above and the instant claim is the step of annealing the formed polymer. Kleeberg shows the above limitation in a method of plasma polymerization of a substrate (see abstract). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Cummins' teachings in light of Yokoyama as suggested by Kleeberg because this would result in stabilizing the formed polymer.

Response to Arguments

6. Applicant's arguments filed June 14, 2005 have been fully considered but they are not persuasive because of the new ground of rejections set forth in the above paragraphs.

Conclusion

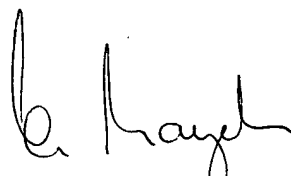
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Kishor Mayekar', is positioned above the printed name.

Kishor Mayekar
Primary Examiner
Art Unit 1753